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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,639	03/29/2004	Robert Gellibolian	10020122-2	4961

22878 7590 10/17/2006

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EXAMINER

KIM, YOUNG J

ART UNIT	PAPER NUMBER
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1637

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/813,639	GELIBOLIAN ET AL.
	Examiner	Art Unit
	Young J. Kim	1637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 September 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 30-53 is/are pending in the application.
- 4a) Of the above claim(s) 36-44,47-51 and 53 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 30-35,45,46 and 52 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>9/9/04</u>	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION***Election/Restrictions***

Applicant's election with traverse of Group I, consisting of claims 30-35, 45, 46, and 52 in the reply filed on September 2, 2006 is acknowledged. The traversal is on the ground(s) that elements of the claims of Group I are found in the remaining claims of Groups II-IV and as such the search required for Group I should find any relevant prior art relating to the claims of Groups II-IV. This is not found persuasive because the search required for claims of Group I would not necessarily return all of the prior art which maybe applicable to Groups II-IV.

For example, while a search in the prior art for a device comprising a molecular beacon (or hairpin) probe probes, might return no prior art (not to say that this is factual), a search in the prior art for a device comprising a generically recited probe would certainly return plenty of prior art.

In other words, the searches are not coextensive in scope and thus, the search required for a particular group would not necessarily reveal all prior art applicable to another group.

Since Applicants do not contend that the claims are obvious variants of each other (i.e., patentably indistinct), and thus, the restriction is proper and thus maintained.

Lastly, Applicants' contention that Groups II-IV can be searched together because no serious burden would be placed on the examiner is well noted. However, such determination is subjective at best since searching an additional group of invention may be burdensome to one, but not to the other. The reconsideration has been noted, but found unpersuasive.

The requirement is still deemed proper and is therefore made FINAL.

Claims 36-44, 47, 48-51, and 53 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking

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claim. Applicant timely traversed the restriction (election) requirement in the reply filed on September 2, 2006.

Preliminary Remark

Claims 30-35, 45, 46, and 52 are pending and are under prosecution herein.

Information Disclosure Statement

The IDS received on September 9, 2004 is acknowledged.

A signed copy of the PTO-1449 is enclosed herewith.

Drawings

The drawings received on March 29, 2004 are acceptable.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 30-35, 45, 46, and 50 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are as follows:

Claims appear to be missing the essential step of hybridizing a target nucleic acid to the molecular beacon probes, so as to open up the molecular beacon probe from its hairpin structure, followed by the binding of the protein thereto, resulting in the detection.

This step appears to be critical in the claimed invention as explicitly shown by instant Figures 3 and 4.

In addition, the instant specification also explicitly discloses that such step is required:

Methods and compositions for identifying protein/nucleic acid binding pairs are provided. In the subject methods, a nucleic acid probe array is first contacted with a target nucleic acid population to produce a hybridized array. The resultant hybridized array is then contacted with a population of proteins to produce a protein bound array. Protein/nucleic acid binding pairs are then detected on the

For the foregoing reasons, it is determined that the claims are missing an essential step.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 30-35, 45, 46, and 52 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-31 of U.S. Patent No. 6,713,262 B2 (herein, ‘262 patent). Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons.

Claim 1 of ‘262 patent is drawn to a method of identifying protein/nucleic acid binding pairs, wherein the method comprises the steps of:

- a) contacting a molecular beacon array comprising a plurality of distinct molecular beacon probes with a common first fluorescent label;
- b) contacting the beacon array with a population of fluorescently labeled proteins to produce a protein bound array, wherein said population of proteins are labeled with a second fluorescent label that makes up a FRET pair with said first fluorescent label; and
- c) detecting the FRET generated from signals from said array.

Clearly, claim 1 of '262 patent is obvious over claims 30 and 52 of the instant application.

With regard to instant claim 31, claim 3 of '262 patent renders obvious.

With regard to instant claim 32, claim 4 of '262 patent renders obvious.

With regard to instant claim 33, claim 7 of '262 patent renders obvious.

With regard to instant claim 34, claim 8 of '262 patent renders obvious.

With regard to instant claim 35, claim 9 of '262 patent renders obvious.

With regard to instant claim 45, claim 11 of '262 patent renders obvious.

With regard to instant claim 46, claim 12 of '262 patent renders obvious.

Conclusion

No claims are allowed.

There is no prior art which teaches or suggests a method of detecting nucleic acid/protein binding, wherein the method employs a molecular beacon probe comprising a first label of a FRET dye pair and a protein comprising a second label of said FRET dye pair.

Inquiries

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Young J. Kim whose telephone number is (571) 272-0785. The Examiner is

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on flex-time schedule and can best be reached from 8:30 a.m. to 4:30 p.m (M-W and F). The Examiner can also be reached via e-mail to Young.Kim@uspto.gov. However, the office cannot guarantee security through the e-mail system nor should official papers be transmitted through this route.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dr. Gary Benzion, can be reached at (571) 272-0782.

Papers related to this application may be submitted to Art Unit 1637 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6(d)). NOTE: If applicant does submit a paper by FAX, the original copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED, so as to avoid the processing of duplicate papers in the Office. All official documents must be sent to the Official Tech Center Fax number: (571) 273-8300. For Unofficial documents, faxes can be sent directly to the Examiner at (571) 273-0785. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1600.



Young J. Kim
Primary Examiner
Art Unit 1637 YOUNG J. KIM
10/13/2006 PRIMARY EXAMINER

YJK